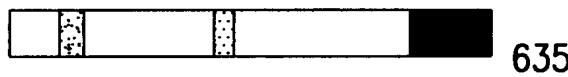




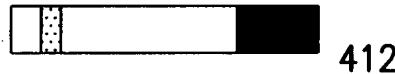
FIG. 1A

GTP chromo SET

*Su(var)3-9*



*SUV39H*



43%

## FIG. 2A

SUV39H				
Su(var)3-9	1	MAENLKGCSVCKSSWNQLQDLCRLAKLSCPALGISKRNLYDEEVEYLCD	50	
	207	.....MGVIAKRPPKG.....EYVERIEC	226	CHROMO 39%
	51	YKKIREQEYYLVKWRGYPDSESTWEPRONLK.....	81	
	227	VENDQYQPFFVKWLGYHDSENTWESLANVADCAEMKFVERHQQLYETY	276	
	82	CVRILKQFHKDLERELLRRHRS <u>KTPRHLDP</u> .SLANYLVQKAKQRRALRR	130	
	277	IAKITTELEKQLEALPLMENITVAEVDAYEPLNLQIDLILLAQYRAAGSR	326	
	131	WEQE.....LNAKRSHLGR.....IT	146	
	327	SQREPQKIGERALKSMQIKRAQFVRRKQLADLALFEKRMNHVEKPSPPIR	376	
	147	VENEVLDLGPPRAFYVINEYRVGEGITLNQVA.VGCECQDCLWAPTGGQC	195	
	377	VENNIDLDTIDSNFMYIHDMIIGKDVPKPEAGIVGCKTEDTEECTASTK	426	
	196	PGASL..HKFAYNDQG.QVRLRAGLPIYE <u>CNSRCRCCYDCPNRVVQKGIR</u>	242	
	427	<u>CCARFAGELFAYERSTRRLRLRPGSAIYE</u> <u>CNSRCSCDSSCSNRLVQHGRQ</u>	476	
	243	YDLC1FRTDDGRGWGVRTLÉKIRKNSEVMÉYVGEITSEEÄERRGQIYDR	292	
	477	VPLVLFKT <u>ANGSGWGVRAATALRKGEEVCEYIEE</u> ITSDEANERGRAYDD	526	
	293	QGATYLF <u>DLY</u> ...VEDVYTVDAA <sup>YYGN</sup> ISHFVNHS <u>CDPNLQVYNVEIDN</u>	339	
	527	NGRTYLF <u>DLYNTAQDSEY</u> IDAANYGNISHF <u>INHSCDPNLAVEPCWIEH</u>	576	
	340	<u>LDERLPRIAFFATRTI</u> RAGEELTFDYNMQVD <sup>PD</sup> MESTRMD <u>SNFGLAGLP</u>	389	
	577	LNVALPHLVFFLRPIKAGEELSDY.IRADNEDV <sup>PYENL</sup> STA.....	618	
	390	GSPKKRVR <u>IÉCKCGTESCRKYL</u> F	412	
	619	.....VRVECRCGRDNCRKVLF	635	SET 51%

## FIG. 2B

E(z)	SDIAGWGIFL	KEGAQKNEF I	SEYCGE I	ISQ	DEADRRGKVY	DK..YMCFL	50
EZH2	SDVAGWGIF I	KDPVQKNEF I	SEYCGE I	ISQ	DEADRRGKVY	DK..YMCFL	
HRX	SPIHGRCGLFC	KRNIDAGEMV	IEYAGNVI	RS	IQTDKREKYY	DSKGIG.CYM	
trx	SHIHGRGLY	CKTDIEAGEMV	IEYAGEL	IRS	TLTDKRERYY	DSRGIG.CYM	
C26	SRIHGWLGLYA	MESIAPDEMI	VEYIGQ	TIRS	LVAEEREKAY	ERRGIGSSYL	
YHR	SAIHNLGLYA	LDSIAAKEMI	IEYVG	ERTRQ	PVAEMREKRY	LKNGIGSSYL	
Su3-9	ANGSGWGVR	ATALRKGEFV	CEYIEE	IITS	DEANERGKAY	DDNG..RTYL	
SUV39H	DDGRGWGVRT	LEKIRKNSFV	MEYNGE	IITS	EEAERRGQIY	DRQG..ATYL	
G9a	TAKGWGVR	LQTIPQGTFI	CEYMGEL	ISD	AEAD...	.RED..DSYL	
KG-1	TQNKGWGIR	LCDDIAKGSFV	CIYAGK	I	LTD DFADKEGL	..EMG..DEYF	

E(z)	FNLN.....	NDFVVDATRK	GNKIRFANHS	INPNCYAKVM	MVTGDH....	100
EZH2	FNLN.....	NDFVVDATRK	GNKIRFANHS	VNPNCYAKVM	MVNGDH....	
HRX	FRID.....	DSEVVDATMH	GNRARFINHS	CEPNCYSRVI	NIDGQK....	
trx	FIKID.....	DNLVVDATMR	GNAARFINHC	CEPNCYSKV	DILGHK....	
C26	FRID.....	LHHVIDATKR	GNFARFINHS	COPNCYAKVL	TIEGEK....	
YHR	FRVD.....	ENTVIDATKK	GGIARFINHC	COPNCTAKII	KVGGR....	
Su3-9	FDLDYNTAQD	SEYTIDAANY	GNISHFINHS	CDPNLAVFPC	WIEHLNVALP	
SUV39H	FDLDY...VE	DVYTVDAAYY	GNISHFVNHS	CDPNLQVYNV	FIDNLDERLP	
G9a	FDLDNK..DG	EVYCIDARYY	GNISRFINHL	CDPNIPVVR	FMLHQDLRFP	
KG-1	ANLDHI..ES	VEYIIDA	AKLE	GNLGRYLNHS	CSPNLFVQNV	FVDTHDLRFP

E(z)	RIGIFAKRAI	QPGEELFFDY	..RYGPT	TEQL K....FVG	I EREME IV*	150
EZH2	RIGIFAKRAI	QTGEELFFDY	..RYSQADAL	K....YVG	I EREME IP*	
HRX	HIVIFAMRKII	YRGEELTYDY	..KFPIE.DA	SNKLPNCGA	KKCRKFLN*	
trx	HIIIFAVRRI	VOGEELTYDY	..KFPFE.D.	EKIPCSOCS	KRCRKYLN*	
C26	RIVIYSRTII	KKGEEITYDY	..KFPIE...	DDKIDCLCGA	KTCRCYLN*	
YHR	RIVIYALRDI	AASEELTYDY	..KFEREKDD	EERLPCLCGA	PNCKGFLN*	
Su3-9	HUVFFTLRPI	KAGEELSFDY	..IRADNE	DVP YENLSTA...	.....	
SUV39H	RIAFFATRTI	RAGEELTFDY	NMQVDPVDM	ESTRMDNSFGL	AGLPGSPKKR	
G9a	RTIAFFSSRDT	RTGEELGFDY	GDRFW..DIK	SKYFTCQCGS	EKCKHSAEAI	
KG-1	WMAFFASKRI	RAGTEL	TWDY	NYEVG..SVE	GKELLCCCGA	IECR.....

E(z)						
EZH2						
HRX						
trx						
C26						
YHR						
Su3-9	VRVECRCGRD	NCRKVLF*				
SUV39H	VRIECKCGTE	SCRKYLF*				
G9a	ALEQSLRLARL	DPHPPELLPEL	GSLPPVNT*			
KG-1	....GRLL*					

FIG.5

EZH2 length: 2600bp (coding: 90-2330)

1	AGGCAGTGGAGCCCCGGCGCGCGGGCGCGCGGGGCGACGCGCGGGAAACAACG	60
61	CGAGTCGGCGCGGGACGAAGAATAATCATGGGCCAGACTGGGAAGAAATCTGAGAAGG M G Q T G K K S E K G	120
121	GACCAAGTTGTTGGCGGAAGCGTCTAAAATCAGACTACATGCCACTGAGACAGCTCAAGA P V C W R K R V K S E Y M R L R Q L K R	180
181	GGTTCAAGACGAGCTGATGAAGTAAAGACTATGTTAGTTCCAATCGTCAGAAAATTTGG F R R A D E V K S M F S S N R Q K I L E	240
241	AAACAACGGAAATCTAAACCAACAATGGAAACAGCGAAGGATAACAGCTGTGCACATCC R T E I L N Q E W K Q R R I Q P V H I L	300
301	TGACTTCTGTGAGCTCATTGGCGGGACTAGGGAGTGTTCGGTGACCAGTGACTTGGATT T S V S S L R G T R E C S V T S D L D F	360
361	TTCCAACACAAGTCATCCCATTAAACACTCTGAATGCCAGTGCTTCAGTACCCATAATGT P T Q V I P L K T L N A V A S V P I M Y	420
421	ATTCTGGTCTCCCCTACAGCAGAATTATGGTGGAAAGATGAAACTGTCTTACATAACAA S W S P L Q Q N F M V E D E T V L H N I	480
481	TTCCCTTATATGGGAGATGAAGTTTAGATCAGGATGGTACTTCATTGAAGAACTAATAA P Y M G D E V L D Q D G T F I E E L I K	540
541	AAAATTATGATGGAAACTACACGGGATAGAGAAATGTCGGTTATAAAATGATCAAATT N Y D G K V H G D R E C G F I N D E I F	600
601	TTGTGGAGTTCGTGAATGCCCTGGTCAAATAATGATGATGACCGATGATGATGGAG V E L V N A L G Q Y N D D D D D D D G D	660
661	ACGATCCTGAAGAAAGAGAAGAAAAGCAGAAAGATCTGGAGGATCACCGAGATGATAAAG D P E E R E E K Q K D L E D H R D D K E	720
721	AAAGCCGCCACCTCGAAATTCTCTGATAAAATTGAAAGCCATTCTCAATGT S R P P R K F P S D K I F E A I S S M F	780
781	TTCCAGATAAGGGCACAGCAGAAGAACTAAAGGAAAAATAAGAAACTCACCGAACAGC P D K G T A E E L K E K Y K E L T E Q Q	840
841	AGCTCCCAGGCCACTTCTCTGAATGTACCCCAACATAGATGGACCAATGCTAAAT L P G A L P P E C T P N I D G P N A K S	900
901	CTGTTCAAGAGAGGAAAGCTTACACTCCATTACGCTTCTGAGGCGATGTTA V Q R E Q S L H S F H T L F C R R C F K	960
961	AATATGACTGCTTCCCTACATCCTTTCATGCAACACCCAAACACTTATAAGCGGAAGAAC Y D C F L H P F H A T P N T Y K R K N T	1020
1021	CAGAAACAGCTAGACAAACAAACCTTGTGGACCAACTGTTACCGACATTGGAGGGAG E T A L D N K P C G P Q C Y Q H L E G A	1080
1081	CAAAGGACTTGTGCTGCTCTCACCGCTGAGCGGATAAAAGACCCCCACCAAAACGTCCAG K E F A A A L T A E R I K T P P K R P G	1140

FIG. 6A

1141 GAGGCCGCAGAACAGGACGGCTTCCAAATAACACTAGCAGGCCAGCACCCCCACCATT 1200  
G R R R G R L P N N S S R P S T P T I N  
1201 ATGTGCTGGAATCAAAGGATACAGACAGTCATAGGAAGCAGGGACTGAAACGGGGAG 1260  
V L E S K D T D S D R E A G T E T G G E  
1261 AGAACAAATGATAAAGAAGAACAGAACAGAACAGATGAAACATTGAGCTCTGAAGCA 1320  
N N D K E E E E K K D E T S S S S E A N  
1321 ATTCTCGGTGTCAAACACCAATAAAGATGAAGCCAATATTGAAACCTCTGAGAATGTGG 1380  
S R C Q T P I K M K P N I E P P E N V E  
1381 AGTGGAGTGCTGCTGAAGCCTCAATGTTAGACTCTCATGGCACTTAATGACAATT 1440  
W S G A E A S M F R V L I G T Y Y D N F  
1441 TCTGTGCCATTGCTAGGTTAATTGGGACCAAAACATGTAAGACAGGTGATGAGTTAGAG 1500  
C A I A R L I G T K T C R Q V Y E F R V  
1501 TCAAAGAACATAGCATCATAGCTCCAGCTCCGGCTGAGGATGTGGATACTCCCTCCAAGGA 1560  
K E S S I I A P A P A E D V D T P P R K  
1561 AAAAGAAGAGGAAACACCGCTTGTGGGCTGCACACTGCAGAAAGATAACAGCTGAAAAAGG 1620  
K K R K H R L W A A H C R K I Q L K K D  
1621 ACGGCTCCTCTAACCATGTTACAACATATCAACCCGTGATCATCCACGGCAGCCTGTG 1680  
G S S N H V Y N Y Q P C D H P R Q P C D  
1681 ACAGTTCGTGCCTTGTGATAGCACAAAATTGGTGAAGAGTTTGTCATGTACTT 1740  
S S C P C V I A Q N F C E K F C Q C S S  
1741 CAGACTGTCAAAACCGCTTCCGGATGCCGCTGCAAAGCACAGTGCAACACCAAGCAGT 1800  
E C Q N R F P G C R C K A Q C N T K Q C  
1801 GCCCGTGCTACCTGGCTGCCAGACTGTGACCTGACCTCTGTCTTACTTGTGGAGCCG 1860  
P C Y L A V R E C D P D L C L T C G A A  
1861 CTGACCATGGGACACTAAAAATGTGCTGCCAGACTGTGACCTGACCTCTGTCTTACTTGTGGAGCCG 1920  
D H W D S K N V S C K N C S I Q R G S K  
1921 AAAAGCATCTATTGCTGGCACCATCTGACGTGGCAGGCTGGGGATTTTATCAAAGATC 1980  
K H L L L A P S D V A G W G I F I K D P  
1981 CTGTCAGAAAATGAATTCTCAGAAATCTGTGGAGAGATTATTTCAAGATGAAG 2040  
V Q K N E F I S E Y C G E I I S Q D E A  
2041 CTGACAGAACAGGAAACTGTATGATAAAATACATGTGCAGCTTCTGTCAACTGAACA 2100  
D R R G K V Y D K Y M C S F L F N L N N  
2101 ATGATTTGTTGGGATGCCAACCCGCAAGGGTAACAAAATCGTTTGCACATTCATTGG 2160  
D F V V D A T R K G N K I R F A N H S V  
2161 TAAATCCAAACTGCTATGCCAAAGTTATGATGGTTAACGGTGTACACAGGATAGCTATT 2220  
N P N C Y A K V M M V N G D H R I G I F  
2221 TTGCCAAGAGGCCATCCAGACTGGCAAGAGCTGTTTGATTACAGATACAGCCAGG 2280  
A K R A I Q T G E E L F F D Y R Y S Q A

FIG. 6B

REPLACEMENT SHEET

SUV39H length: 2732bp (coding: 45-1284)

1 TCGCGAGGCCGGCTAGGCCGAATGTCGTTAGCGTGGGAAAGATGGCGAAAATTAA 60  
M A E N L K  
61 AAGGCTGCAGCGTGTGCAAGTCTCTTGAATCAGCTGCAGGACCTGTGCCGCCTGG 120  
G C S V C C K S S W N Q L Q D L C R L A  
121 CCAAGCTCTCCCTGCCCTGCCCTCGGTATCTCTAAAGAGGAACCTCTATGACTTGAAGTCG 180  
K L S C P A L G I S K R N L Y D F E V E  
181 AGTACCTGTGGATTACAAGAAGATCCGCACAGGAATTACCTGGTAAATGGCGT 240  
Y L C D Y K K I R E Q E Y Y L V K W R G  
241 GATATCCAGACTCAGAGAGCACCTGGGAGCCACGGCAGAATCTCAAGTGTGTGCCGTATCC 300  
Y P D S E S T W E P R Q N L K C V R I L  
301 TCAAGCAGTTCCACAAGGACTTAGAAAGGGAGCTGCTCCGGCGGACCAACCGGTCAAAGA 360  
K Q F H K D L E R E L L R R H H R S K T  
361 CCCCCCGGACCTGGACCCAAGCTGGCAACTACCTGGTGCAGAAGGCCAAGCAGAGGC 420  
P R H L D P S L A N Y L V Q K A K Q R R  
421 GGGCGCTCCGTGGCTGGGAGCAGGAGCTCAATGCCAAGCCAGCCATCTGGGACGCCATCA 480  
A L R R W E Q E L N A K R S H L G R I T  
481 CTGTAGAGAATGAGGTGACCTGGACGGCCCTCCGGGGCTTCGTGTACATCAATGAGT 540  
V E N E V D L D G P P R A F V Y I N E Y  
541 ACCGTGTTGGTGAGGGCATCACCTCAACCAGGTGGCTGGGCTGCCAGTGGCACT 600  
R V G E G I T L N Q V A V G C E C Q D C  
601 GTCTGTGGCACCCACTGGAGGCTGCTGCCGGGGCGTCACTGCACAACTTGCCTACA 660  
L W A P T G G C C P G A S L H K F A Y N  
661 ATGACCAGGGCCAGGTGGCTTCGAGGGGGCTGCCCACTACCGAGTGCAACTCCGC 720  
D Q G Q V R L R A G L P I Y E C N S R C  
721 GCCGCTGGCTATGACTGCCAAATCGTGTGGTACAGAAGGGTATCCGATATGACCTCT 780  
R C G Y D C P N R V V Q K G I R Y D L C  
781 GCATCTTCCGACGGATGATGGCGTGGCTGGGCGTCCGCACCCCTGGAGAACATTGCA 840  
I F R T D D G R G W G V R T L E K I R K  
841 AGAACAGCTCGTCATGGAGTACGTGGAGAGATCATTACCTCAGAGGAGGCAGAGCGGC 900  
N S F V M E Y V G E I I T S E E A E R R  
901 GGGGCCAGATCTACGACCGTCAGGGGCCACCTACCTCTTGACCTGGACTACGTGGAGG 960  
G Q I Y D R Q G A T Y L F D L D Y V E D  
961 ACGTGTACACCGTGGATGCCCTACTATGCCACATCTCCACTTTGTCAACCACAGT 1020  
V Y T V D A A Y Y G N I S H F V N H S C  
1021 GTGACCCCAACCTGCAGGTGTACAACGTCTCATAGACAACCTTGACGAGCGGCTGCC 1080  
D P N L Q V Y N V F I D N L D E R L P R  
1081 GCATCGCTTCTTGCCACAAGAACCATCCGGCAGGGAGCTCACCTTGATTACA 1140  
I A F F A T R T I R A G E E L T F D Y N

FIG. 7A